

IN THE CLAIMS

1. (Currently amended) A device with an interlock apparatus for supplying gas to a semiconductor manufacturing device, the device comprising:

at least one solenoid valve configured to control the supply of a gas from a gas source to the semiconductor manufacturing device by open/shut operations;

a main controller configured to output a control signal for the semiconductor manufacturing equipment and a driver signal;

a driver configured to apply a driving voltage to the at least one solenoid valve in response to the driver signal from the main controller; and

an interlocker configured to sense the open/shut state of the at least one solenoid valve by sampling the driving voltage and comparing it to a reference voltage, and the interlocker further configured to transmit an interlock signal to the main controller.

2. (Original) The device of claim 1, wherein the interlocker comprises:

a comparator configured to compare the driving voltage of the at least one solenoid valve with a reference voltage value, and configured to transmit a result of the comparison to the main controller.

3. (Original) The device of claim 2, further comprising:

a display configured to display an abnormal state indicator when the result indicates an abnormal operation of the at least one solenoid valve.

4. (Original) The device of claim 2, further comprising:

a backflow cutoff valve, coupled between the gas source and the at least one solenoid valve, configured to prevent the gas from flowing backward.

5. (Currently amended) A method of supplying gas to a semiconductor manufacturing device comprising:

outputting a control signal from a main controller;

applying a driving voltage to at least one solenoid valve in response to the control signal to control the supply of gas;

comparing the driving voltage with a reference voltage to obtain comparison data;
transmitting the comparison data to the main controller;~~and~~
transmitting an interlock generation signal from the main controller to the semiconductor manufacturing device in response to the comparison data; and.
preventing gas flow from a gas source to another gas source.

6. (Original) The method of claim 5, further comprising:
displaying an abnormal state indicator when the comparison data indicates an abnormal operation of the at least one solenoid valve.

7. (New) A device with an interlock apparatus for supplying gas to a semiconductor manufacturing device, the device comprising:
at least one solenoid valve configured to control the supply of a gas from a gas source to the semiconductor manufacturing device by open/shut operations;
a main controller configured to output a control signal for the semiconductor manufacturing equipment and a driver signal;
a driver configured to apply a driving voltage to the at least one solenoid valve in response to the driver signal from the main controller;
an interlocker configured to compare the driving voltage of the at least one solenoid valve with a reference voltage value, and configured to transmit a result of the comparison to the main controller; and
a backflow cutoff valve that is coupled between the gas source and the at least one solenoid valve, the backflow cutoff valve configured to prevent the gas from flowing backward.

8. (New) The device of claim 7, further comprising a display configured to display an abnormal state indicator when the result indicates an abnormal operation of the at least one solenoid valve.